

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed130 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward	Locality:
Date Desc.: 09/01/87	Elevation: 212 metres
Map Ref.: Sheet No. : 8837_N 1:50000	Rainfall: No Data
Northing/Long.: 6660800 AMG zone: 55	Runoff: No Data
Easting/Lat.: 759400 Datum: AGD66	Drainage: No Data

Geology

ExposureType: Undisturbed soil core	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: No Data	Substrate Material: No Data

Land Form

Rel/Slope Class: No Data	Pattern Type: No Data
Morph. Type: No Data	Relief: No Data
Elem. Type: Terrace plain	Slope Category: Very gently sloped
Slope: 1 %	Aspect: 0 degrees

Surface Soil Condition (dry): Surface crust, Recently cultivated

Erosion:

Soil Classification

Australian Soil Classification: N/A	Mapping Unit: N/A
ASC Confidence: Confidence level not specified	Principal Profile Form: Ug5.12
	Great Soil Group: Black earth

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.1 m	Very dark grey (10YR3/1-Moist); Very dark greyish brown (10YR3/2-Dry); , 10YR72, 0-2% , 0-5mm, Faint; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12p	0.1 - 0.25 m	Very dark grey (10YR3/1-Moist); , 10YR72, 0-2% , 0-5mm, Faint; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Very dark grey (10YR3/1-Moist); , 10YR73, 0-2% , 0-5mm, Distinct; , 10YR72, 0-2% , 0-5mm, Faint; Medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 1 m	Dark brown (7.5YR3/2-Moist); , 10YR72, 0-2% , 0-5mm, Distinct; Medium clay; Strong grade of structure, 20-50 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B2	1 - 1.3 m	Brown (7.5YR4/2-Moist); , 7.5YR32, 10-20% , 15-30mm, Distinct; , 10YR82, 0-2% , 5-15mm, Prominent; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 20-50 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Clear, Wavy change to -

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C 1.3 - 2.04 m Brown (7.5YR5/4-Moist); , 10YR82, 2-10% , 5-15mm, Prominent; , 7.5YR32, 0-2% , 5-15mm, Distinct; Light clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; 90-100%, coarse gravelly, 20-60mm, angular, Basalt, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 9 (pH meter);

Morphological Notes

A11p Quartz sand occurs in small quantities at several levels. Wedge structure starts at 60cm.
Less than 2% weathered basalt occurs at 120-130cm. Note ? aeolian component of soil. ?Uf6.23 ?vuspe.

Observation Notes

Parent Rock: residual, basalt, sand Nandewar Volcanics

Site Notes

Observation ID: 1

Project Code: EDCERO1 Site ID: 3d
Agency Name: CSIRO Division of Soils (QLD)

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.02	7.7A	0.052A	35.76B	15.48	1.88	0.13			
0 - 0.1	8.11A	0.115A	35.57B	15.57	0.98999	0.28			
0.1 - 0.2	8.55A	0.12A	36.22B	15.47	0.51	0.4			
0.3 - 0.4	8.68A	0.126A	35.8B	16.24	0.34	0.89			
0.7 - 0.8	8.92A	0.149A	32.44B	18.51	0.42	2.37			
1.2 - 1.3	8.98A	0.168A	33.96B	19.13	0.63	3.24			
1.9 - 2	9.1A	0.212A	34.27B	18.46	0.42	4.1			

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle		Size	Analysis	
								GV	CS		FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.02	<0.1B	1C									17.7	59.1
0 - 0.1	0.2B	0.9C	1.6J								16	60.1
0.1 - 0.2	0.5B	0.74C	<1J								15.6	58.8
0.3 - 0.4	0.9B	0.7C	<1J								15.6	59.3
0.7 - 0.8	1.2B	0.6C	<1J								15.6	59.9
1.2 - 1.3	1.3B	0.43C	1J								16.4	63.2
1.9 - 2	14.9B	0.31C	<1J								17.2	64.4

[illegible]

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_K	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_MG	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_NA	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
19B1	Carbonates - manometric
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5A2	Chloride - 1:5 soil/water extract, automated colour
6B3	Total organic carbon - high frequency induction furnace, infrared
7B1	Water soluble nitrate - automated colour
9B1	Bicarbonate-extractable phosphorus - manual colour
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method